E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

VOL. 29 NEW YORK, APRIL 17, 1958 No. 16

THIS WEEK IN THE MARKETS...

- **U.S. copper sales low; better abroad. Kennecott buying Asarco Garfield smelter.**
- **Falling U.S. general imports may "export" recession. Lead and zinc sales low.**
- **Vuillequez says need lead and zinc end use data. More tin arrives for Wah Chang.**

COPPER—domestic average 24.835c per lb delivered

Sales of copper in the U.S. were unusually low this week. Sales abroad recovered to more normal levels. Katanga dropped its price to 22c from 22.625c, N.Y. and main European ports, on April 9.

Kennecott is buying the Asarco copper smelter at Garfield for $15-million. It will be the new owner on Jan. 1, 1959. Nearly all the copper treated in the past has been for Kennecott.

Anaconda has not commented on the rumor it will send its U.S. mined copper to Europe in order to fill its contracts. However, if the strike in Chile persists it is logical to assume it would send U.S. copper rather than interrupt shipment on contracts or get metal from others.

Inco reduced its Canadian copper price to 24¼c to maintain equality with the U.S. 25c price following a rise in the Canadian currency.

The Administration in Washington indicated it would accept the 2c import duty (see p 3).

The sharp reduction in the past few months in U.S. imports, owing mainly to the U.S. drop in business activity, it is feared may so reduce demand for goods in the rest of the world that a recession may start abroad.

LEAD—12c New York

Lead sales were 2,203 tons. Last week is the only time when our records show lower sales. The low figure some suggest is partly a result of the absence of buyers and sellers who are attending meetings in St. Louis.

Information continues to come from Washington that the Administration might favor further stockpiling of lead and zinc. Doubtless the State Dept. is concerned with the effects of higher import tariffs on other countries, especially those in the Western Hemisphere. They are greatly dependent on exports of lead and zinc and in some cases other minerals to the U.S. Further cuts in their income from these could lead to economic and political disasters. Stockpiling or other subsidies would perhaps sufficiently satisfy the demands for Government help to the mining areas and at the same time eliminate the need for our Government taking measures that would antagonize the people of other countries, especially those in this Hemisphere.

Most evidence now indicates the Government will not resume zinc stockpiling, or continue lead buying beyond June. It will probably continue to support the increased tariffs on lead and zinc (Eisenhower several times has said he was in support of the increases). Statements attributed to the State Department may have been leaked. The notion the Department resists the demand in the country for measures that would harm other countries, it may have been thought, would have a slight beneficial effect on our foreign relations.

D. M. Smith, president of the Association of American Battery Manufacturers, said at the Lead Industry Association meeting in St. Louis that battery makers would need 18,000 tons less lead in 1958. He said this is 9% below 1956 uses.

London lead was about 9.1c bid most of the week.

ZINC—10c East St. Louis

Zinc sales by U.S. refiners were almost at a record low this week.

All sellers are at the new premiums for Special High and High Grade zinc. Various sellers indicate none was sold after April 8 at the higher prices so the new premiums are effective for April 9.

Jean Vuillequez, vice president of American Metal Climax, said at the lead and zinc meetings in St. Louis, end use statistics for lead and zinc were needed in order to provide lead time so that stability of production, stocks and prices could be obtained.

Much of the trouble zinc and lead are in reflect the U.S. recession. The expected tariff increase might cause price increases by as much as the rise (many doubt this) at most. It is generally believed that if the high cost mines are expected to operate profitably behind such a tariff increase they will be disappointed.

TIN—92.875c a lb N.Y.

Wah Chang's initial shipment of 1,429 tons of Indonesian tin concentrates are expected to produce about 1,000 tons of tin metal. The shipment arrived on Mar. 15 after an unusually long shipping period. According to our information, a shipment of 350 tons arrived Apr. 10. Reports from Malaya tell us that Japan has begun buying metal from Red China at about 89½c a lb for 99.9% tin, using official sterling exchange rates. The domestic market continues spotty.

IN THIS ISSUE . . .

Copper Institute Data ..... p. 3
Administration Favors Cu Tariff ..... p. 3
March Zinc Statistics ..... p. 6
Daily and Average Prices ..... p. 9
Mineral and Ore Markets ..... p. 12

Kennecott Copper Corporation
Kennecott Sales Corporation

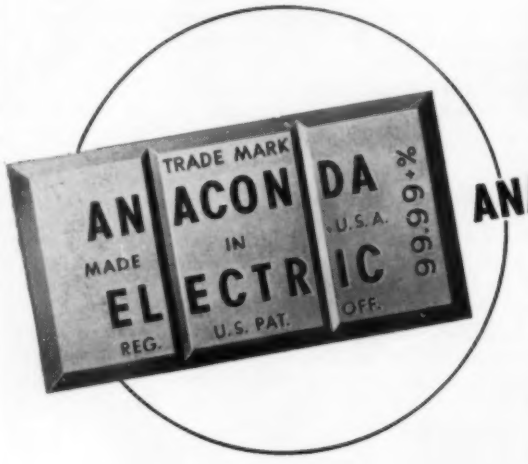
Producers and Sellers of

Electrolytic Copper
Chino Fire Refined Copper (K.C.M.)
Braden Fire Refined Copper (★★★)
Molybdenite

Offices

161 East 42nd St., New York 17, N. Y.

SPECIAL
HIGH GRADE
zinc



ANACONDA 99.99+% ELECTRIC®

A consistent favorite with the trade for zinc-base die casting alloys. Year in and year out many leading die casters use Anaconda Electric Zinc. Always available from

Anaconda Sales Company
25 Broadway, New York 4, N. Y.

84313

E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

GEORGE H. CLEAVER.....*Market Editor*
CARL COASH.....*Publisher*
ALVIN W. KNOERR.....*Editor*
J. R. O'CONNELL JR., *Asst. Market Editor*
DONALD C. MCGRAW JR., *Adv. Sales Mgr.*

E&MJ METAL AND MINERAL MARKETS is published each Thursday with a daily quotation for copper, lead, zinc, tin, aluminum and silver. Commodities that change infrequently are quoted at weekly or monthly intervals.

E&MJ METAL & MINERAL MARKETS, April 17, 1958. Vol. 29, No. 16. Published weekly by McGraw-Hill Publishing Company, Inc. James H. McGraw (1860-1948), Founder. Member, Audit Bureau of Circulations. Publication office, 330 W. 42nd St., New York 36, N. Y. See panel below for directions regarding subscriptions or change of address.

Executive, Editorial, Circulation and Advertising offices, 330 W. 42nd St., New York 36, N. Y. Donald C. McGraw, President; Joseph A. Gerardi, Executive Vice President; L. Keith Goodrich, Vice President and Treasurer; John J. Cooke, Secretary; Nelson Bond, Executive Vice President, Publications Division; Ralph B. Smith, Vice President and Editorial Director; Joseph H. Allen, Vice President and Director of Advertising Sales; A. R. Venezian, Vice President and Circulation Coordinator.

Subscriptions are solicited only from executive, managerial and other official personnel affiliated with firms which are buyers, sellers or producers of metals, ores and nonmetallic minerals. Position and company connection must be indicated on subscription orders. Send to address shown in box below.

Subscription rates for individuals in the field of publication: United States and Possessions, $10 per year, $16 for 2 years, single copy, 50 cents; Canada, $10 per year, $16 for 2 years; Other Western Hemisphere and the Philippine Islands, $15 per year, $25 for 2 years, $30 for 3 years; elsewhere, $25 per year, $40 for 2 years, $50 for 3 years; payable in advance. Single copy outside U.S. and Canada, 75 cents (U.S. currency) payable in advance. Airmail rates available on request.

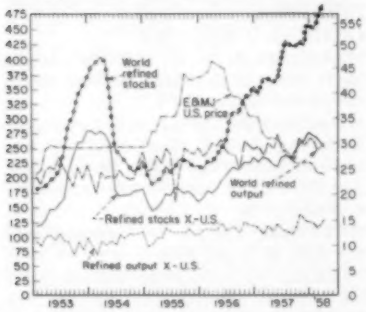
Second-class mail privileges authorized at New York, N. Y. Title registered in U. S. Patent Office.

©Copyright 1958 McGraw-Hill Publishing Company, Inc. All rights reserved. Printed in U.S.A.

SUBSCRIPTIONS: Send subscription correspondence and change of address to Subscription Manager, E&MJ METAL AND MINERAL MARKETS, 330 West 42nd Street, New York 36, N. Y. Subscribers should notify publisher promptly of any change of address, giving old as well as new address, and including postal zone number, if any. If possible, enclose an address label from a recent issue of the magazine. Please allow one month for change to become effective.

Postmaster . . . Please send Form 3579 to E&MJ METAL AND MINERAL MARKETS, 330 W. 42nd St., New York 36, N.Y.

Copper Production and Stocks



Data are from the Copper Institute and are in thousands of short tons. They include March 1958. World refined output and stocks do not include the U.S.S.R., Japan, the Scandinavian countries, Australia, Yugoslavia, and the Mesina Mine in Transvaal. The two series "X-U.S." are the above world producer statistics less the U.S. No fabricator stocks are included.

•

Foreign Copper Deliveries High; World Stocks Rise 24,000 Tons

Stocks of refined copper soared again in March according to Copper Institute figures. World stocks reached 493,587 short tons, a rise of 23,840 tons from February. All of the increase was in the U.S. where stocks rose to 238,641 tons; in the rest of the world stocks dropped to 254,946 tons from 268,524. The difference represents the sharp recession in the U.S. and the continued good business in most of the rest of the world. For the last three months foreign stocks have been decreasing. They remain above stocks for earlier years.

Crude primary production rose in the U.S. and outside largely reflecting the longer month. Refined output also rose somewhat. Total deliveries to fabricators rose about 5,000 tons. But deliveries in the U.S. dropped about 15,000 tons to the lowest level since January 1954 (except for the low figure reached during the strike in July 1955). Deliveries outside the U.S. reached a record. Copper deliveries to the U.S. stockpile were almost unchanged at slightly less than 10,000 tons.

Copper Institute figures for February and March 1958 follow:

United States

Production:	Feb.	Mar.
Crude primary .....(a)	87,130	90,191
Crude secondary .....(a)	6,222	8,301
Total .....(a)	93,352	98,492
Refined copper	128,299	130,075
Deliveries refined	93,784	78,462
Stock, end, ref'd	201,223	238,641

Outside United States

Production:		
Crude primary .....(a)	143,586	157,569
Crude secondary	284	365
Total .....(a)	143,870	157,934
Refined copper .....(a)	119,263	129,111
Deliveries, refined .....(a)	130,925	151,247
Stock, end, ref'd .....(a)	268,524	254,946

(a) Corrected

•

Vuillequez Cites Overproduction As Key to Lead-Zinc Price Fall

"The main reason for the decline in lead and zinc prices during 1957 was not Russian sales or reduced consumption but continued overproduction in the Free World. The chief stimulant to this overproduction has been purchases by the U.S. Government," said Jean Vuillequez, American Metal Climax vice president, in an address to the combined meeting of the American Zinc Institute and Lead Industries Association in St. Louis, April 15.

Vuillequez pointed out that announced cutbacks here and abroad, according to American Metal Climax estimates, place current zinc smelter output at a lower rate than the Free World's apparent consumption in 1957, but still above present depressed demand. According to similar estimates, lead smelter production at present continues to run in excess of 1957 apparent consumption.

"It is not Government protection or interference that will help us. What we need on a world-wide basis is discipline by governments and large corporations to prevent a recurrence of overproduction," Vuillequez said. He quoted the financial desk of the New York Herald Tribune in saying, "Unless . . . voluntary methods for controlling production, inventories and plant capacity (are developed), the Government may be induced by organized labor to institute mandatory limitations on the growth of the industrialized economy."

He called for continued research for the expansion of the uses of the two metals, "a long-term project which will eventually pay dividends." He also pointed out the need for accurate statistics of the output of lead and zinc in end use products to help producers more accurately gauge consumer trends.

•

Administration Favors End of Copper Tariff Suspension

Washington (McGraw-Hill Washington News Bureau): Interior Secretary Fred A. Seaton has told the Senate Finance Committee that the Administration now favors legislation which would end a 7-year Congressional suspension of the 2c import duty on foreign copper. His statement in a routine report to the committee on the so-called Watkins Bill which would end the suspension June 30, is being hailed as an easement of White House objections to metal tariff boosts. Such is not entirely accurate.

The Congressional suspension, which has been renewed every year since 1951, is due to run out June 30, anyway. It would take new legislation to continue; no new bill is needed to end it — it just dies automatically. As everyone is well aware, Congress is in no mood to continue tariff suspensions on depressed commodities, so the willingness of the Administration to end the copper tariff suspension is in a class with the President expressing a willingness to forego anti-inflation moves — he couldn't get them passed to begin with.

Moreover, the suspension lift is far less than will satisfy domestic copper producers. They favor, and have had introduced several bills to carry out, a new boost in import tariffs to 4c, which they will try to get tacked on the Trade Agreements Extension Bill.

Seaton's stand does, however, hint that the Long Range Minerals Program revision he has promised to send to the Hill April 28 may contain some selected tariff boosts for other depressed metals, if not for copper. Lead and zinc, of course, still await the Tariff Commission's decision on the rate increase requested by domestic producers (see *M&MM* Oct. 3, 1957, p. 1). Seaton stressed, on the other hand, that he favored only the end to the copper tariff suspension, and not the other bills increasing the duty.

T. L. Diamond & Co., Inc.

ONE WALL STREET
NEW YORK 5, N. Y.

◆ BUYERS OF SULPHUR; FLUORSPAR BAUXITE AND GRAPHITE
◆ AGENT FOR MINING COMPANIES

WHitehall 4-8630 ◆ Cable Address: CLAIREMIN, N. Y.

U. S. Copper Imports

U. S. copper imports in January as compiled by the U. S. Bureau of Census, courtesy American Bureau of Metal Statistics, in short tons:

	1957 Nov.	1957 Dec.	1958 Jan.
Ore:	6,305	9,689	12,192
Canada	2,143	2,520	2,309
Mexico	441	752	597
Cuba	1,284	1,164	1,112
Argentina	...	...	12
Bolivia	309	554	592
Chile	640	1,576	1,362
Peru	1,333	1,111	245
Philippines	...	1	2,610
Union of South Africa	...	1,915	3,300
Australia	76	95	...
Others	79	1	53
Blister:	20,857	25,298	22,759
Mexico	3,043	3,143	3,690
Chile	16,378	17,283	13,447
Peru	265	1,268	1,664
Rhodesia & Nyasaland	...	1,680	2,847
Union of South Africa	555	556	1,111
Turkey	...	1,368	...
Others	616	...	...
Refined:	18,427	11,206	16,280
Canada	6,368	5,152	8,284
Mexico	518	336	820
Chile	35	570	263
Peru	322	1,529	1,280
Germany (West)	551	891	...
Sweden	2,464	...	...
United Kingdom	2,195	218	470
Belgian Congo	950	350	1,550
Rhodesia & Nyasaland	4,304	2,160	3,113
Union of South Africa	720	...	500
Total imports	45,589	46,193	51,231

Copper exports in January were 30,314 tons, compared with 27,352 tons in December. Of the total 26,123 tons were refined and 1,229 were ore.

International Minerals and Metals Corporation

11 BROADWAY, NEW YORK 4, N. Y.

•

COPPER, ZINC

BUYERS

ORES, CONCENTRATES
SCRAP, RESIDUES

FOR PHELPS DODGE PLANTS
in Laurel Hill, L. I., N. Y.
Douglas, Arizona — El Paso, Texas

FOR NATIONAL ZINC COMPANY
(Subsidiary)
Bartlesville, Oklahoma

SELLERS

COPPER (ELECTROLYTIC)
CADMIUM
ZINC AND BY-PRODUCTS
MERCURY

•

1958 Aluminum Sheet, Plate Shipments Well Below 1957

Aluminum Association statistics on shipments of sheet, plate and foil in 1958 show sharp drops in the first two categories and a slight pickup in foil, when compared with 1957 figures. Figures are in short tons:

	1957 Feb.	1958 Jan.	1958 Feb.
Sheet, plate:			
Non-Heat-Treatable	38,171	36,118	35,738
Heat-Treatable	11,904	8,007	6,647
Total	50,075	44,125	42,385
Foil (aluminum content)	6,703	8,626	6,917

	1957 Jan.-Feb.	1958 Jan.-Feb.
Sheet, plate		
Non-Heat-Treatable	82,169	71,856
Heat-Treatable	25,464	14,654
Total	107,633	86,510
Foil (aluminum content)	14,480	15,543

Miscellaneous Metals

Wholesale lots, (a) f.o.b. ship. pt.; (b) delivered; (c) f.o.b. N. Y.

ALUMINUM: lb (b), 30 lb ingot 99.5%, 26.1c; pig, 24c; Ingot, 99.75%, 26.6c; 99.85%, 28.1c, eff. 4-1-58.

ANTIMONY: lb, Apr. 10-16, boxed N.Y. (c), 32.590c; bulk (a), 29c; boxed (a), 29½c.

BISMUTH: lb, ton lots, $2.25

CADMIUM: lb (b), Apr. 10-16, sticks $1.55; shapes, $1.55.

CALCIUM: lb, ton lots, slabs, pieces, $2.05

CHROMIUM: lb (b), 97%, .5%C, $1.29; 9-11%C, $1.38; Elec., 99%, $1.29. Eff. 9-1-56

COBALT: lb (c), 500 lb lots, $2.00; 100 lb, $2.02; less, $2.07. Eff. 2-1-57; fines, $2.00

COLUMBIUM: lb, 99½%, dep. on lot: roundels, $55-70; electrode segments, $60-75; rough ingots, $65-80

GALLIUM: gr, 1000 gr lots, $3; less, $3.25

GERMANIUM: gr, 1000 lots, 1st red., 40c (b)-43½c(a); intrinsic, 44½c(b)-48½(a); 10,000 lots, 1st red., 38c(b)-39½c(a); intrinsic, 40.2c(b)-43½c(a).

INDIUM: troy oz, 99.9%, small lots, $2.25; over 5,000 oz, $1.25-2.25

IRIDIUM: troy oz, $70-80

LITHIUM: lb 99.5%, $9-$11

MAGNESIUM: lb (a), 10,000 lb lots, pig ingot 99.8%, 35¼c-36.65c; notched ingot, 36c-37.45c. Eff. 8-13-56

MANGANESE: lb (b), 95½%, carloads bulk, 45c; packed, 45¾c; Elec. (a), frt. allowed E. of Miss., 99.9%, 34c; ton lots, 36c. Eff. 4-1-57. Prem. for hydrogen removed, ¾c lb

MOLYBDENUM: lb (a), powder, carbon red., $3.35. Eff. 8-56

NICKEL: lb (a), duty included, 74c eff. 12-6-56. Dealers, 74c. Powder (b) U.S., 80-85c; sinter (a), 70¼c, eff. 12-6-56

OSMIUM: oz, $70-90, nominal

PALLADIUM: troy oz, $19-21

PLATINUM: troy oz, $67-75, aver., $72

QUICKSILVER: flask, N. Y., $232-36

RADIUM: mg, Ra content, $16-21½

RHODIUM: troy oz, $118-$125

RUTHENIUM: troy oz, $45-$55

SELENIUM: lb, comm. grade, $7; high purity, $9.50. Eff. Feb. 19, 1958

SILICON: lb (b), 97%, max. .51-.75% Fe, crushed, 23.85c; lump, 22c. Eff. 9-1-57. Hyper-pure: #1, $360; #2, $250; #3, $160; solar cell, $100. Eff. 4-1-57

SODIUM: lb, carloads, 16½c; less, 17c

TANTALUM: kilo (2.2 lb): rod, $128; sheet, $100

TELLURIUM: lb, $1.65-$1.75

THALLIUM: lb, $7.50

TITANIUM: lb (a), A-1, 99.3%, max. .3% Fe, $2.05; max. .5% Fe, $1.85. Eff. 6-3-57 and 1-4-58

TUNGSTEN: lb, 98.8%, 1000 lb lots, $3.15. Eff. 8-1-57. Hydrogen red., 99.99%, $3.85, Eff. 1-2-58

VANADIUM: lb, 90% V, 100 lb lots, $3.65

ZIRCONIUM: lb (a), sponge, powder, platelets: low hafnium, $7-14; comm. $5-10

Metallic Ores

Tons of 2000 lb or units of 20 lb, unless otherwise stated. Short ton unit=stu; long ton unit=ltu. (a) c.i.f. U. S. ports, (b) f.o.b. ship pt., (c) f.o.b. mine or mill

ANTIMONY ORE: stu of Sb cont., 50-55%, $2.25-2.40; 60%, $2.40-2.60; lump, 65%, $3.00-3.10

BERYLLIUM ORE: stu BeO cont., 10-12% (c), $46-48 dep. on quan.; imported ore, (a), $34-35.

CHROME ORE: lt, dry basis, subject to penalties if guarantees are not met, f.o.b. cars, Atlantic ports

Rhodesian: (c) (b)	
48% Cr_2O_3, 3 to 1 ratio	(a)$47-$49
48% Cr_2O_3, 2.8 to 1 ratio	(a)$44-$46
48% Cr_2O_3, no ratio	(a)$37-$39
South African (Transvaal): (c)	
48% Cr_2O_3, no ratio	$36-$37
44% Cr_2O_3, no ratio	$26-$26.50
Turkish (basis 48% 3 to 1):	
48% Cr_2O_3, 3 to 1 ratio, lump and concentrates	(a)$55-$57
46% Cr_2O_3, 3 to 1 ratio, lump and concentrates	(a)$52-$54
Pakistan (Baluchistan):	
48% Cr_2O_3, 3 to 1 ratio	(a)$52-$53

(a) Nominal. (b) Long term contracts. (c) 1958 shipment.

COBALT ORE: lb Co cont., (b); free market, 10%, 60c; 11%, 70c; 12%, 80c.

COLUMBITE ORE: lb of pentoxide, 65% Cb_2O_5, col-tant. ratio 10 to 1, $1.10-1.15; 8½ to 1, $1.00-1.05.

IRON ORE: lt, lower lake ports, Lake Superior ore 1958: *Mesabi, non-bessemer*, 51½% Fe, $11.45; *Old Range, non-bessemer*, $11.70 — *Mesabi, bessemer*, 51½% Fe, $11.60; *Old Range, bessemer*, $11.85 — *Eastern ores*, cents per ltu, del. furnaces, foundry and basic, 56-62%, 17-18c — *Swedish*, 60-68% (contracts), stu 25c+dep. on grade, (a) Atlantic — *Brazilian*, gross ton 68½% Fe, (b) $14.60, prem. for low P. Eff. 1-1 & 4-1, 1958

MANGANESE ORE: Indian, ltu Mn, 46-48% Mn, (a), export duty included, import duty extra, $1.33-$1.36, nominal. Exclusive of export duty, $1.195-1.225. Low Fe (max. 2%), 48%, ltu, duty extra, nominal. Mn dioxide, 84% MnO_2, lt, bulk, crude, (a), $110-120. Chem. grade, st, coarse or fine, 84% MnO_2, carloads, (b) Eff. 1-1-57: paper bags, $144.50; burlap bags, $148.00; drums $152.50

MOLYBDENUM ORE: lb cont. Mo, 90-95% MoS_2, (b) Climax, $1.18+cost containers; (b) Washington, Pa., $1.23

TITANIUM ORE: gross ton, ilmenite, 59½% TiO_2, f.o.b. cars, Atlantic ports, $26.25-30.00. Rutile, 94%, st, for del. within 12 mos. $100-$105.

TUNGSTEN ORE: stu WO_3, 65% basis: foreign ore, nearby arrival, (a), duty extra, wolfram, $11.50-$12.50; scheelite, $10-$11.50 dep. on grade. Low moly scheelite higher. U. S. scheelite, stu, (c) $19.50-$20. London, ltu WO_3, good ore, wolfram, 85s bid, 90s asked

VANADIUM ORE: lb V_2O_5 cont., dom., (c), 31c

ZIRCON ORE: (sand), lt, (a) Atlantic, 65% ZrO_2, $50-51 dom. 66%, st, (b) Jacksonville, $50; Starke, Fla., $55

E. A. GODOY & CO., INC.

CUNARD BUILDING, 25 BROADWAY

NEW YORK 4, N. Y.

CHROME ORES • Refractory • Metallurgical • Chemical

MANGANESE ORES • Metallurgical • Chemical

IRON ORES • Open hearth • Blast furnace

Rolled Metals, Etc.

BRASS — Cents per lb (base prices)

	Sheet	Wire	Rods
Yellow Brass	42.69	43.23	42.63
Best quality brass	43.85	44.42	43.82
Red brass 80%	44.90	45.44	44.84
Red brass 85%	45.67	46.21	45.61
Com'l bronze 90%	46.98	47.52	46.92
Gilding metal	47.76	48.30	47.70

Eff. Jan. 13

COPPER — per lb Sheets, over 20 in. wide, 48.13c, rolls 20 in. and under, 46.16c; Wire, bare, carload lots f.o.b. mills 30.355c, eff. Jan. 13, 1958.

LEAD SHEETS — Per lb, full rolled, 140 sq ft 17½c.

MONEL METAL — Per lb (base prices) Standard cold-rolled sheet, 97c; cold-rolled strip, 99c Rods, hot-rolled 80c.

NICKEL — Per lb (base prices) sheets. cold-rolled, $1.13; rods, hot-rolled, 94c.

NICKEL SILVER — Per lb. sheets, 10% 57.93c; 18% 62.66c; wire and rods, 10% 60.26c.

PHOSPHOR BRONZE — Per lb, sheets 5% tin, 67.17c; wire and rods 5% 67.67c; 10% 74.38c.

ZINC — Per lb, carload lots f.o.b. mill (base price): Sheet 24c; ribbon 20½c; plates 19c.

ZINC DIE-CASTING ALLOY — Ingot per lb, carloads lots, delivered, No. 3, 13c; No. 5, 13¼c.

•

Metallic Compounds

ANTIMONY TRIOXIDE — Per lb, carload lots, 50-lb bags; 24c f.o.b. shipping point; less than carload lots, 26c Eff. Dec. 6.

ARSENIOUS OXIDE (arsenic trioxide), refined, white min. 99%, per lb, 5½c, in barrels carload lots delivered. F.o.b. Laredo, Texas, 4½c; on N. Y. docks, 5c.

COBALT OXIDE — Ceramic grade 72½ to 73½% Co, $1.52 per lb east of Mississippi. and $1.55 per lb west of Mississippi. Grade 70% to 71%, $1.48@$1.51. Quotations are for oxide packed in 350-lb containers. Eff. Feb. 1, 1957

COPPER SULPHATE — Per lb, in carload lots, 10.70c, per 100 lb, crystals or diamond f.o.b. ref'y, eff. Jan. 13.

GERMANIUM OXIDE — Per gm, 22½c to 24c.

•

Military Metal Needs Stable

Washington: The Commerce Department has announced that the military demand for steel, copper and aluminum in the July-September quarter of this year will be unchanged from the set-aside for this quarter.

The announcement indicated that Defense Department and Atomic Energy Commission orders are becoming more stable; in recent quarters the amount of steel, copper and aluminum earmarked for defense production has been declining.

Metallurgy's NEW Alphabet

...quantity produced by WAH CHANG CORPORATION

SELECTOR: High-Purity WCC Metals

Zr — ZIRCONIUM...Reactor Grade Sponge and Ingot, Commercial Grade Sponge and Ingot. Zircaloy.

W — TUNGSTEN... Ores, Chemicals, Oxides, Powders, Tablets, Wire, Rod, Electrodes, Specialized products of all types.

Cb — COLUMBIUM... Oxides, Powders, Ingots, Electrodes. Soon in Wire, Rod, Strip and Foil.

Hf — HAFNIUM... Oxides, Sponge, Metal.

Mo — MOLYBDENUM... Powders, Tablets, Electrodes.

Ta — TANTALUM... Oxides, Powder. Soon in Wire, Rod, Strip and Foil.

More WCC Metals Are On The Way... Look For Them

WAH CHANG CORPORATION

233 Broadway, New York 7, N. Y., U.S.A.
Cable Address: "Wahchang" New York

BRINGING TOMORROW CLOSER WITH NEW METALS

GOLD
ZINC
CADMIUM
BISMUTH
SILVER
ANTIMONY
ARSENIC
LEAD
ANTIMONIAL LEAD

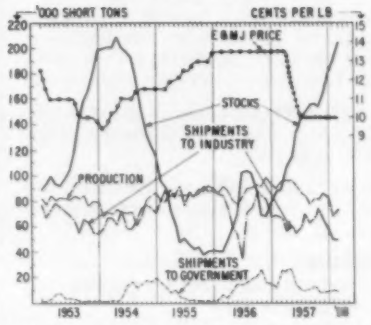
UNITED STATES
SMELTING REFINING & MINING CO.
Sales Office: 62 WILLIAM STREET
NEW YORK 5, N. Y.

ASSOCIATED
METALS & MINERALS CORP.
75 WEST STREET, NEW YORK 6
WH 3-5040

buyers of ORES and CONCENTRATES
sellers of VIRGIN METALS

AMMC
CABLE: "ZINCUM"

U.S. Slab Zinc



The above data, except price, are from the American Zinc Institute and are in thousands of short tons. They refer to slab zinc of all regularly operating United States primary and secondary smelters. Production from foreign ores is included. Data include March 1958.

•

March Slab Zinc Data

A summary of the February and March 1958, American Zinc Institute statistics in short tons, follows:

	Feb.	Mar.
Stock at beginning	180,346	189,189
Production	68,354	72,274
Production, daily rate	2,441	2,331
Shipments:		
U. S. Industry	49,072	48,948
Export and drawback	446	111
U. S. Gov't	9,993	8,763
Totals	59,511	57,822
Stock at end	189,189	203,641
Unfilled orders	(b)	(b)

(b) Discontinued by Z. I.

Shipments by grade, including to U.S. stockpile, follow:

	1956	1958	
	Mo. Av.	Feb.	Mar.
Special High	28,613	20,034	21,819
Regular High	11,824	8,553	6,452
Intermediate	2,064	1,572	1,223
Prime Western, etc.	43,710	29,352	28,328
Totals	86,211	59,511	57,822

Slab zinc production by grades, with minor deductions for metallurgical losses in upgrading metals, in tons:

	Feb.	Mar.
Special High	23,234	27,920
Regular High	7,595	8,010
Intermediate	2,771	1,408
Prime Western, etc.	34,754	34,936
Totals	68,354	72,274

Stocks of slab zinc at the end of February and March, by grades, in tons:

	Feb.	Mar.
Special High	52,263	58,364
Regular High	11,089	12,647
Intermediate	6,238	6,423
Prime Western, etc.	119,599	126,207
Totals	189,189	203,641

•

U. S. Tin Consumption Down 8% in 1957

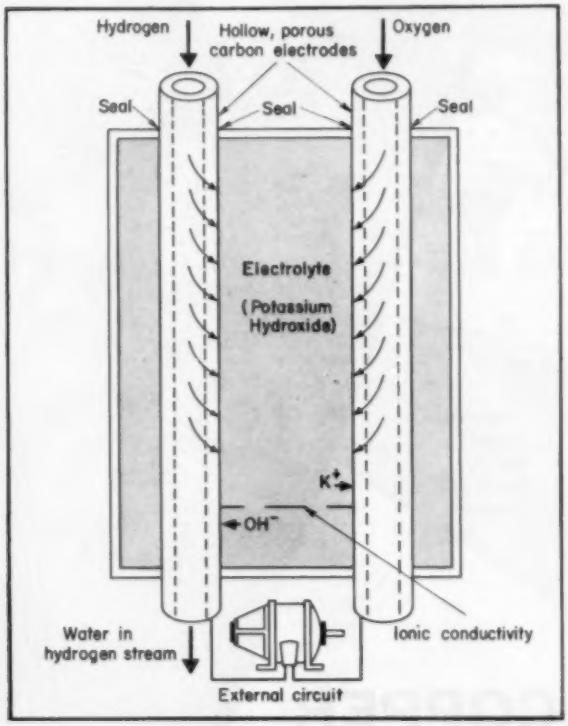
Tin consumption in the United States declined 8% from 1956 to 82,800 long tons in 1957, according to the U. S. Bureau of Mines.

Consumption totaled 54,500 tons primary and 28,300 tons secondary compared with 60,500 tons primary and 29,800 tons secondary in 1956. The data on secondary tin include 3,100 tons in

(Continued on p. 11)

WATCH THESE TRENDS

A NEW BATTERY – THE FUEL CELL – will have an impact on the mining industry. Among the scientific marvels to be exhibited at the Brussels World's Fair will be a fuel cell being developed by National Carbon Co. Div., Union Carbide Co. Since this cell is repeatedly referred to as a battery, and in many respects functions as a battery, its importance as a portable energy source is worth the careful appraisal of lead producers, and operators of mineral processing plants using dc current to extract or refine by electrolytic methods.



As shown in the drawing above, the fuel cell consists of two specially treated porous carbon, tubular electrodes immersed in an electrolyte. Hydrogen and oxygen are passed through the electrodes, diffusing through the porous carbon to the surface where each gas comes in contact with the electrolyte.

At the hydrogen electrode, the electrochemical reaction with potassium hydroxide produces water and a free electron which enters the electric circuit. The electron migrates through the external circuit to the oxygen electrode where the electron is accepted. Thus science has taken a long stride closer toward the long-sought goal of direct electricity from fuel without the intermediary resort to conversion to steam for turbogenerator use.

Over-all efficiency of a steam system is approximately 30 to 35%, whereas the fuel cell has a top efficiency of 70 to 75%. National Carbon reports that the fuel cell works on air as well as oxygen, but the oxygen system under 5 atm. pressure delivers more power. A source of hydrogen is necessary. In portable fuel cells where hydrogen generating equipment must be lightweight, metal hydrides serve as fuel source. In larger installations, hydrogen can be generated from catalytic cracking of any conventional or waste-product hydrogen source.

U.S. Army Signal Corp. demonstrated their "Silent Sentry" mobile radar unit last fall, which is powered by fuel cells generating 28 volts. The amount of electricity produced depends on the size of the fuel cell; and by varying the size and number of cells, many combinations of voltage and current can be obtained.

Fuel cells hold great promise for the future, and the day may well come when such common devices as the lawnmower, outboard motor and small cars will be propelled by silent-running fuel cell-motor combinations. Another use may be in connection with solar and/or nuclear energy. A fuel cell could be used to produce energy, using a solar furnace to break up water into hydrogen and oxygen. Or, as some have already suggested, the fuel cell could be used in connection with nuclear energy – use the atomic reactor to produce hydrogen and oxygen for the cell.

In an article to appear in May *E&MJ*, three basic types of fuel cells are illustrated – fuel-gas, direct fuel, and Redox fuel.

U. S. Zinc Imports

U. S. zinc imports in January as compiled by the U. S. Bureau of Census, courtesy American Bureau of Metal Statistics, in short tons:

	1957 Nov.	1957 Dec.	1958 Jan.
Ore:	48,171	48,629	45,288
Canada	16,714	16,828	13,445
Mexico	14,660	16,256	12,208
Cuba	223	123	...
Guatemala	722	554	442
Honduras	222	91	138
Bolivia	1,631	1,604	2,013
Peru	13,588	8,972	12,092
Union of South Africa	...	747	4,456
Australia	261	1,723	364
Philippines	...	6	11
Others	150a	1,725	119
Refined:	16,081	22,069	12,889
Canada	9,325	8,281	5,016
Mexico	1,220	3,575	349
Peru	1,831	1,726	801
Austria	110	110	55
Belgium	2,383	1,805	1,115
Germany (West)	55	...	224
Italy	220	744	417
Yugoslavia	882	601	...
Belgian Congo	55	5,227	3,456
Australia	...	...	1,120
Others	...	...	336
Total imports	64,252	70,698	58,177

Total exports during the month were 413 tons, all refined, compared with 222 tons in December.

U. S. Lead Imports

U. S. lead imports in January as compiled by the U. S. Bureau of Census, courtesy American Bureau of Metal Statistics, in short tons:

	Nov. 1957	Dec. 1957	Jan. 1958
Ore:	12,852	18,639	29,245
Canada	1,572	1,425	3,093
Mexico	247	420	299
Guatemala	365	768	702
Honduras	285	161	239
Bolivia	3,697	1,853	870
Peru	5,612	3,188	5,515
Union of South Africa	...	6,066	11,262
Australia	1,031	4,711	7,184
Philippines	...	23	53
Korea	14	...	...
Others	29	24	28
Refined:	32,422	39,061	21,767
Canada	3,551	792	832
Mexico	10,928	14,252	7,470
Peru	3,277	6,712	5,600
Belgium	331	771	920
Denmark	961a	245	672
France	...	281	55
Germany	610	...	143
Spain	358	...	358
United Kingdom	773	222	1,963
Yugoslavia	1,292	3,750	1,323
Morocco	364	...	...
Australia	9,977	11,423	2,130
Others	...	613	301
Total imports	45,274a	57,700	51,015

Total lead exports in January were 113 tons, 97 tons of ore and 16 tons refined, compared with 123 tons the previous month.

ORES METALS

SUBSIDIARIES AND AFFILIATES IN

Amsterdam
London
Argentina
Australia
Austria
Bolivia
Belgium
Brazil
Canada
Cuba
France
Germany
India
Italy
Japan
Korea
Mexico
New Zealand
Peru
Portugal
Rhodesia
Spain
Switzerland
Taipei
Turkey
South Africa
Uruguay

COPPER
ZINC
LEAD
ALUMINUM

Philipp Brothers, Inc.

70 PINE STREET, NEW YORK

CABLES · PHIBRO NEWYORK

E&MJ QUOTATIONS

Daily Prices of Metals

Apr.	COPPER ELECTROLYTIC Domestic Refinery	COPPER ELECTROLYTIC Export Refinery	LEAD New York	LEAD St. Louis	ZINC (b) Delivered (a)	ZINC (b) East St. Louis	ALUMINUM Primary Pig 99%	TIN Straits New York
10	24.375	21.125	12.000	11.800	10.500	10.000	24.000	93.000
11	24.525	21.275	12.000	11.800	10.500	10.000	24.000	92.500
12	No Market	21.275	12.000	11.800	10.500	10.000	24.000	92.500
14	24.375	21.375	12.000	11.800	10.500	10.000	24.000	92.250
15	24.300	21.275	12.000	11.800	10.500	10.000	24.000	92.375
16	24.600	21.475	12.000	11.800	10.500	10.000	24.000	92.875
Averages	24.435	21.300	12.000	11.800	10.500	10.000	24.000	92.583
Calendar Wk. Avgs. Apr. 7-12	24.470	21.579	12.000	11.800	10.500	10.000	24.000	92.729

(a) Prime Western Zinc sold on delivered basis at centers where freight from East St. Louis exceeds one-half cent a pound.

The above quotations are our appraisal of the major United States markets, based on sales reported by producers and their agencies. They represent payments received by producers for the product. They are reduced to the basis of cash, New York or St. Louis, as noted. Prices in cents per pound.

Copper, lead and zinc quotations are based on sales for prompt and future deliveries; aluminum weighted average prices are based on estimated sales and announced prices; tin quotations are for prompt delivery only.

COPPER prices, domestic, in the trade are quoted on a delivered basis, that is, delivered at consumer's plants. Delivery costs vary with the destination. The above prices are net prices at the refineries; the average shipment cost is deducted in order to arrive at a refinery price. Beginning Jan. 2, 1957, the average differential between delivered and f.o.b. prices is taken as 0.400c per lb.

COPPER quotations, foreign or export, reflect prices obtaining in the open market and are based on sales in the foreign market reduced to the f.o.b. refinery equivalent, Atlantic seaboard. On f.a.s. transactions, eff. Jan. 2, 1957, we deduct 0.125c. for lighterage, etc., to arrive at the f.o.b. refinery quotation.

COPPER quotations are for ordinary forms of wirebars and ingot bars. The premiums on special shapes, effective in some instances on deliveries beginning Sept. 1, 1955, are: Standard ingots 0.25c per pound; slabs 0.55c and up, cakes 0.6c and up, depending on weight and dimensions; billets 1.725c and up, depending on dimensions and quality. Discount on cathodes 0.125c to 0.15c per pound.

ZINC quotations reflect sales of the Prime Western grade as well as sales of other grades when sold on a Prime Western basis. (b) **Zinc premiums . . .** obtaining over Prime Western zinc in the East St. Louis market on the following grades, in cents per pound: **Selected 0.10c; Brass Special 0.25c; Intermediate 0.5c, High Grade** zinc sold on contract, delivered to the consumers' plants, commands a premium of 1c per lb, eff. Apr. 9, 1958, over the East St. Louis basis for Prime Western: **Special High Grade** premium or differential is 1.25c per lb, eff. Apr. 9, 1958.

LEAD quotations are for the common grade, and are based on sales of domestically refined metal sold to domestic consumers. The differential on sales in the Chicago district is 15 points under New York; for California 20 points under New York; for New England add 7½ points to the New York basis. Corroding grade commands a premium over common lead of 10 points.

ALUMINUM quotations refer to primary pig, 99%, delivered to consumers. The U. S. primary producers as well as the major exporter of primary aluminum to the U. S., quote prices delivered to consumers in the U. S. The weights are estimated on the basis of daily average primary capacity in those cases where daily sales or shipments are not available. Ingot sales by primary producers, reduced to the pig price, are included in calculating the quotation. The premium on standard ingots, 99+ % is 2.1c per lb.

Note: The daily quotations for copper, lead and zinc are weighted averages of sales reported to *E&MJ*; weekly averages are arithmetical averages of the daily quotations; monthly averages are the arithmetical averages of the daily quotations.

Silver, Gold, and Sterling Exchange

Apr.	Silver N.Y.	Silver London	Sterling Exchange	London Gold (a)
10	88.625	76.125d.	281.7187	249s. 3¼d.
11	88.625	76.125d.	281.7187	249s. ½d.
12	Not Quoted			
14	88.625	76.125d.	281.7578	249s. ½d.
15	88.625	76.125d.	281.8125	249s. 0d.
16	88.625	76.125d.	281.8125	249s. 1d.
Av.	88.625	—	281.764	—
Calendar Wk. Avgs. Apr. 7-12	88.625	—	281.706	(a) open market

The daily silver quotation reported by Handy & Harman, in cents and fractions of a cent per troy ounce, is the price paid by Handy & Harman in settlement for silver contained in unrefined silverbearing materials submitted to them for refining. It is determined on the basis of offers of bar silver .999 fine as made to Handy & Harman for nearby delivery at New York by regular suppliers in quantities sufficient to meet daily requirements, and it is usually one quarter cent below the price at which such offers are made.

The Treasury's purchase price of newly mined domestic silver was established at 90.5c per troy ounce, 1000 fine, effective on July 1, 1946 under an amendment to the Silver Purchase Act of July 6, 1939.

London silver quotations are in pence per troy ounce, basis .999 fine.

London gold quotations are per troy ounce, basis 1000 fine.

Sterling, in cents, noon buying rate for cable transfers as certified by the Federal Reserve Bank of New York, for customs purposes.

Aluminum Alloys Secondary April 10-16

	Tons	Price/lb
No. 13	32	23.97c
No. 43	17	23.68c
No. 360	5	24.53c
No. 380		
1% zn	276	21.33c
2% zn	8	21.17c
3% zn	120	20.26c

The secondary aluminum alloy prices are weighted average prices calculated from reports by secondary aluminum producers of the prices and quantities of their sales.

London Metal Exchange

Apr.	COPPER Cash Bid	COPPER Cash Asked	COPPER 3 Mo. Bid	COPPER 3 Mo. Asked	LEAD Current Month Bid	LEAD Current Month Asked	LEAD 3 Mo. Bid	LEAD 3 Mo. Asked	ZINC Current Month Bid	ZINC Current Month Asked	ZINC 3 Mo. Bid	ZINC 3 Mo. Asked	TIN Cash Bid	TIN Cash Asked	TIN 3 Mo. Bid	TIN 3 Mo. Asked
10	175	175¼	176	176¼	72⅜	72¾	72⅜	72¾	61⅞	62	62	62¼	731	733	731	732
11	172¾	173	174½	174⅝	72½	72⅝	72½	72¾	61¾	61⅞	62¼	62⅜	730	730½	728½	729
14	173	173¼	174½	175	72⅛	72⅜	72¼	72½	61¼	61½	62	62⅛	730	730½	727½	729
15	173½	173¾	175½	176	72⅜	72½	72⅜	72½	61½	61¾	62	62¼	730	730½	727	727½
16	173	173½	175	175¼	72½	73	72½	73	62½	62¾	62½	62¾	730	731	729	731½

Prices are for the official a.m. session in pounds sterling per ton of 2240 lb. Copper basis electrolytic and fire refined wire bars, lead 99.97%, zinc 98% and tin min. 99.75%

THIS WEEK'S BUSINESS INDICATORS

	Latest Week	Preceding Week	Month Ago	Year Ago	Net Change Year Ago
Steel Rate (% of capacity in operation)	(d) 47.4	(a) 48.5	52.4	85.5	−38.1
Steel Ingot Production, thousands of tons	(d) 1,283	(a) 1,308	1,417	2,313	−1,030
Automobile Production (cars and trucks)	(d) 110,032	(a) 87,870	111,772	160,369	−50,337
Electric Power Output (millions kwh.)	11,326	11,645	11,793	11,693	−367
Engr'g Const. Awards, 4-week daily av., in thousands (c)	$70,782	$72,719	$57,326	$57,478	+$13,304
Federal Reserve Index of Industrial Production (e)	(d) 129 Mar.	....	130	146	−17
E&MJ Index of Nonferrous Metal Prices (e)	167.31 Mar.	....	168.38	203.16	−35.85
All Commodities, Bureau of Labor Statistics (b)	(d) 119.6 Mar.	....	118.9	116.9	+2.7

(a) Revised. (b) 100 is composite of 1922-3-4. (c) From Eng. News-Record. (d) Preliminary. (e) Base period 1947-49

FRED H. LENWAY
AND COMPANY, INC.

112 MARKET STREET
SAN FRANCISCO 11, CALIF.
TELEPHONE: DOUGLAS 2-8560

Buyers of...

TUNGSTEN

METAL SCRAP
COMPLEX ORES
CONCENTRATES
GRINDINGS
RESIDUES

HARDY

ORES
METALS
SULPHUR
CONCENTRATES

M. W. HARDY & CO., INC.
141 BROADWAY
New York 6, N. Y.

Cable Address: HARDYACE, NEWYORK
Telephone WOrth 4-1551

CABRA Recommends Amendments To Extension of Trade Act

The growing volume of brass mill product imports can affect the copper and brass distributor just as adversely as it already has the brass mills, T. E. Veltfort, managing director of the Copper & Brass Research Association said, in a talk outlining mutual problems before the Copper and Brass Warehouses Association at its Annual Convention at White Sulphur Springs, W. Va.

Because the present so-called "escape clause" of the Trade Agreements Act has proved largely ineffective, said Veltfort, the brass mill producers through CABRA have recommended amendments to the proposed extension of the Act. These would: (1) extend the Act for one or two years, rather than for five; (2) make the Tariff Commission's findings be final as to the facts, and subject to veto only on grounds of foreign policy; (3) enlarge the Tariff Commission from six to seven members, and (4) in giving relief, permit changes of specific duties to ad valorem rates and increases up to 50% above ad valorem equivalents as of 1934.

"There is nothing inconsistent in approving the principle of freer international trade to promote world amity," Veltfort concluded, "and yet fighting vigorously a specific ill-considered application that tends to ruin unjustly an important American industry."

•

$25-Million Put Up to Finance Freeport's Cuban Nickel Project

New York: Six major steel and automobile companies, all consumers of substantial amounts of nickel, have put up $25,250,000 to help finance Freeport Sulphur Company's Cuban nickel project, Langbourne M. Williams, Freeport president, has announced.

The money was received last week by Freeport's subsidiary, Cuban American Nickel Co., which is constructing facilities for the production of 50-million lb of nickel and 4.4-million lb of cobalt annually.

"The participation by these large nickel consumers in the financing of our project is a clear indication of the need for additional nickel productive capacity," Williams said. "The action of these private companies serves to confirm the views of the Congressional committees and Government agencies which for years have sought to increase the supply of this essential metal."

The total capital requirements of the project are estimated at $119-million of which a group of banks has agreed to lend up to $75-million. Production from facilities at Moa Bay, Cuba and Port Nickel, Louisiana is scheduled to begin in the Summer of 1959.

The six steel and automobile companies also entered into contracts with Cuban American Nickel under which they are committed to purchase substantial amounts of nickel under certain conditions and under which they have the right to purchase additional amounts.

Metal Output from Copper Scrap Rose 10% in January

Production of all metals from copper-base scrap as reported by domestic primary copper refiners, secondary copper smelters, and brass mills increased 10% to 68,000 short tons in January, according to the U.S. Bureau of Mines.

Part of this quantity was recovered from kettle or furnace charges consisting chiefly of scrap, partly from charges consisting chiefly of ore or concentrates, to which some scrap had been added, and partly from charges consisting entirely of scrap. Many of the products, therefore, contained both primary and secondary metal.

All groups participated in the increase, of which 3,000 tons were in operations at brass mills, 2,000 at primary refiners, and 1,000 at secondary smelters. The corresponding secondary recovery total for January 1957 was 81,000 tons, the highest monthly total in that year.

Although consumption of scrap at secondary smelters increased 10% in January, receipts rose 19%, and stocks of scrap, at these plants, rose 11%. In December, scrap consumption and receipts were virtually equal. Brass mills consumed 28,000 tons of purchased scrap and 40,000 tons of refined copper in January compared with 25,000 and 41,000 tons, respectively, in December. Consumption of refined copper at wire mills was 3,000 tons, or 5%, greater in January than in December.

Exports of unalloyed copper scrap increased 91% to 49,000 tons and of copper-base alloy scrap 39% to 70,000 tons in 1957 compared with 1956.

Statistics of secondary copper and brass in the United States, in short tons:

	Year 1957	Dec. 1957	Jan. 1958
Consumption of purchased copper-base scrap (gross):			
At secondary smelters	342,580	27,447	30,103
At brass mills	330,208	25,141	28,354
At primary producers	348,184	25,897	27,034
Total	1,020,972	78,485	85,491
Production all metals from copper-base scrap (gross):			
At secondary smelters—			
Brass ingot production	279,945	21,614	23,444
Refined copper	25,609	2,430	2,003
At brass mills (products)	324,906	24,728	27,896
At primary producers (refined)	211,594	14,166	15,992
Other products	6,776	303	560
Total secondary recover from copper-base scrap	832,839	62,121	68,365
Copper recovered from purchased copper-base scrap:			
By secondary smelters	246,753	19,603	21,096
By brass mills	245,721	18,490	21,063
By primary producers	218,161	14,436	16,515
Exports (copper-base scrap):			
Unalloyed	48,989	485	(6)
Alloyed	69,996	1,805	(6)
Stocks of copper-base scrap end (gross):			
At secondary smelters	26,432	26,432	29,455
At brass mills	39,916	39,916	41,645
At primary producers	36,320	36,320	33,938

Nickel Shortage Ended in 1957; U.S. Consumption Declined

The availability of nickel since mid-1957 exceeded demand for the first time after many years of shortages, according to the U.S. Bureau of Mines. The improved supply-demand position resulted mainly from increased production, virtually complete stockpile deferments, and decreased requirements for nickel in the United States. Despite the improved supply, intense activity continued in exploring for new sources, developing new mines, and planning new and expanding present smelting and refining facilities.

Free World production of nickel advanced for the seventh consecutive year to establish a new high of about 248,000 short tons in 1957, a 7% increase over 1956. Of the 1957 output, Canada furnished about 76%, producing 5% more than in 1956. Output in Cuba was 38% greater than in 1956. Canada and Cuba made new production records. Domestic production (about 10,000 tons) also made a new record, increasing about 50%, but it was equal to only 8% of consumption in the U.S. in 1957, compared with 5.3% in 1956.

Consumption of nickel in the U.S. is estimated at 122,000 short tons in 1957, compared with 127,578 tons in 1956. The smaller consumption resulted from a 75-day strike during the first half of 1957 at one of the largest consuming plants and to substantially reduced usage of nickel during the last quarter.

Stocks of nickel held by consumers in the U.S. at the end of 1957 were the highest ever recorded and totaled about 25,000 short tons, compared with 12,672.

Imports of nickel into the U.S. reversed a seven year uptrend in 1957 and declined to 141,895 short tons, compared with 142,642 tons in 1956.

Nickel, exclusive of scrap, consumed in the U.S. in 1957, by uses, in pounds:

Ferrous:			
Stainless steels	3,129,955	2,573,703	50,750,238
Other steels	2,581,122	2,231,491	31,088,216
Cast irons	610,401	497,926	8,034,300
Nonferrous alloys	5,894,040	5,166,854	65,627,434
High temperature and electrical resistance alloys	1,060,396	1,024,342	19,473,075
Electroplating:			
Anodes	3,370,885	3,118,957	44,974,493
Solutions	71,022	86,104	1,043,724
Catalysts	256,537	265,108	3,582,907
Ceramics	53,684	33,135	574,798
Magnets	106,703	105,694	1,594,451
Other	233,599	206,661	4,985,544
Total reported by companies (95%)	17,368,344	15,309,975	231,729,180
Consumption by all companies (est.)	18,340,000	16,167,000	244,698,000

•

Tin

(Continued from p. 6)

1957 and 2,200 tons in 1956 contained in imported tin-base alloys.

Five items — tinplate, solder, bronze and brass, babbitt and tinning consumed 91% of the tin used in 1957, unchanged from 1956 and 1955. Consumption of tin in tinplate, the largest use of primary tin, which took almost 60% of the totals, declined the most, 2,700 tons; solder, the second largest use, consumed 1,640 tons less (primary 1,525 tons and secondary 115); bronze, the largest use of secondary tin, decreased 2,150 tons (primary 575 and secondary 1,575); babbitt declined 220 tons, mainly in primary tin; and that used in tinning was about 400 tons smaller. Tin for white metal was 6% more, with a larger tonnage going into britannia metal, and tin for type metal principally secondary, increased 1%.

Brass mills used 1,535 long tons of tin in 1957 (925 of primary pig tin and 610 tons of secondary) compared with 1,915 in 1956 (1,185 of primary and 730 of secondary).

Imports of metallic tin declined in 1957 for the fifth successive year and fell 10% below 1956. This was the longest period of continuous downtrend recorded in metallic tin imports. Of the total imports, Malaya, the principal source, furnished about 70%; however, the quantity of tin received from Malaya in 1957 decreased 8% compared with 1956, and was the smallest since 1951. Other important sources of metal in 1957 included: Netherlands, 14% (receipts virtually unchanged); United Kingdom, 9% (receipts increased almost 5%); and Belgium-Belgian Congo, 7% (receipts decreased 44% to the lowest tonnage since 1946). Receipts of concentrates in terms of metal were only 175 tons in 1957, or about the same as in 1936. As there was no smelting activity in the U. S. after January, the material imported in 1957 was for other purposes. In addition 4,800 long tons (5,000 in 1956) gross weight, chief value tin, of alloys (including alloy scrap) were brought into the U. S. in 1957, mainly from Denmark in the form of 94% tin alloys.

Exports of metallic tin (including ores and concentrates) in 1957 were 1,530 long tons (1,120 in 1956), with Canada and the U. K. the principal destinations. The gross weight of tin-alloy scrap exported (mostly to the United Kingdom) was 9,400 long tons in 1957 compared with 4,100 tons in 1956.

Total U. S. tin stocks decreased to 36,000 l. t. during 1957 from 36,380 tons. Although tin afloat to the U. S. dropped from 5,500 tons at the beginning to 1,735 at the end of 1957, industrial stocks of tin in the U. S. increased 3,400 tons during the year. Stocks of pig tin rose for the sixth consecutive year to 22,540 long tons at the end of 1957, or 3,500 more than at the beginning of the year. Tinplate mills, holding about 80% of domestic plant stocks of pig tin, increased their inventories 4,390 tons to the highest since 1942, and tin in process at these plants reached the highest point recorded. End of the year pig tin stocks at other industrial plants, however, decreased 400 tons.

U. S. consumption of primary and secondary tin, in long tons:

	1956	1957		
		Jan.-Dec.	Nov.	Dec.
Stocks, beginning	27,757	28,446	31,030	32,225
Receipts	93,283	89,524	7,375	5,695
Supply	121,040	117,970	38,405	37,920
Stocks, end	28,446	32,325	32,225	32,325
Total processed	92,594	85,645	6,180	5,595
Intercompany scrap transactions	2,270	2,845	255	240
Consumed in manufacturing	90,324	82,800	5,925	5,355
Primary	60,470	54,500	3,590	3,310
Secondary	29,854	28,300	2,335	2,045

SLAB ZINC

★ ELECTROLYTIC
Special High Grade
High Grade
Continuous Galvanizing Line Grades

★ FIRE RETORT
High Grade
Intermediate
Continuous Galvanizing Line Grades
Brass Special
Select
Prime Western

American Zinc sales company
Distributors for AMERICAN ZINC, LEAD & SMELTING COMPANY
Columbus, Ohio ☆ Chicago ☆ St. Louis ☆ New York ☆ Detroit ☆ Pittsburgh

Mineral and Ore Markets

Flourspar markets are practically dead. Some sellers are doing a little business but it is nearly all in lots of about one carload with occasionally two or three. These sales of spot material of European metallurgical fluorspar, about 72½% grade, are going at $31½ in most cases, duty paid c.i.f. U.S. ports. The sales are being made from stocks here in the U.S. So far as we can ascertain no sales are being made for less than this though one seller suggests that he might sell large lots for less. Some sales have been made at above $31½.

We are told some deliveries of European metallurgical fluorspar are being made on old contracts at $32 per short ton duty paid c.i.f. U.S. ports. This business is possibly far in excess of the spot business. Ordinarily spot business is much greater than contract deliveries.

The poor market in the U.S. reflects the considerable slump in steel output. With more doubt being expressed recently that we will see a pick up in general economic activity before fall many buyers are getting even less inclined to give encouragement to sellers of fluorspar.

•

Two nickel mines in the U.S.S.R. area taken over from Finland (Petsamo) are producing, according to a report from the McGraw-Hill correspondent in Helsinki. Production from these mines, the Russians say, has increased about 5% per year for the past 14 years. Two power stations are reported to have been built in this area and a Russian engineer said most of the power is being used for tin production and other industry. The Mond Nickel Co. formerly had a concession in the Petsamo area.

•

Iron ore deposits will be developed in the Rourkela area of Orissa state in India by Japan. The latter will forward 8-million U.S. dollars for development according to the McGraw-Hill correspondent in New Delhi. A Japanese official told the correspondent, "Our Government's step is designed to cooperate with the U.S. in exploiting Indian iron mines with money from President Eisenhower's Special Fund." An official note to this effect is to be given to the U.S. Ambassador to India, Mr. Ellsworth Bunker.

•

The Indian Government has withdrawn a restriction on the export of manganese ore. From July 1957 to June 1958 export quota holders of manganese ore were to use at least 40% of their quota for exporting manganese ore of less than 42% grade. Now there are no restrictions on exports.

Meantime the market in the U.S. remains very slow. The low steel rate and the poor prospect for the immediate future has kept new business at very low levels.

Belgorod iron ore deposits in the U.S.S.R., according to a Tass story attributed to I. S. Burdyugu, Deputy Minister of Geology and Mineral Conservation, amount to about 15-billion tons of ore. It is about 61 to 62% iron with a silica content of only about 5½%. Some of the ore is of 69% iron. Mining settlements are being set up. Some mines will go into production in 1958 and others in 1959, according to the story received by the McGraw-Hill Vienna correspondent.

•

Australian ocean freight rates on rutile and zircon are too high according to shippers in that country. Producers are trying to get a 30% reduction in freight rates. They indicate they were raised much in February 1957 and the reason given for the increase was the high prices then being obtained for the ores. New South Wales producers are also trying to get the Government to reduce the royalty they must pay on the mineral sands.

Prices for rutile ore have gone down a little further. Some sellers report they are willing to do business here at about $100 to $105 per short ton, f.o.b. cars U.S. ports. The drop in prices reflects the drastic decline in the titanium metal business.

•

Tungsten ores have weakened further in Europe. London dropped down to 85 shillings bid and 90 shillings asked. Some dealers say practically no business is being done and certainly none at the asking price.

•

Platinum continues downhill. Dealer metal is available at below the previously quoted figure of $68. Observers look for a price cut by major suppliers in the near future.

•

Quicksilver demand continues good. The supply situation has improved somewhat. Sales continue in the $232-36 range.

•

A Custom Smelter Copper Price April 10-16

The following prices are computed by *E&MJ Metal and Mineral Markets* from data on flat price and average price sales reported by the American Smelting & Refining Co. They refer to electrolytic copper in standard shapes.

Delivered consumers' plants	23.500c
F.O.B. refinery	23.100c

They are for sales in the U. S. market and are adjusted to the nearest one-eighth cent. A one-quarter cent deduction for selling commission has been made.

•

Lead Average (Monterrey)

The net price realized by the American Smelting & Refining Co. on all of its sales of Mexican pig lead, including metal sold for consumption in Mexico, during the week ended April 12, 1958, was 8.52c (U.S.) per lb f.o.b. refinery Monterrey, Mex.

London Copper Prices

The following prices in £ sterling per long ton c.i.f. European ports are calculated by the London Metal Bulletin (see *M&MM* Feb. 13, 1958, p 3).

Apr. 7	175.706	Apr. 10	174.612
Apr. 8	175.258	Apr. 11	174.965
Apr. 9	173.909	Apr. 12	176.629
Av.			175.180

Apr. 3, £177.222; Apr. 4, £176.910; Apr. 5, no quote. Av. Mar. 31-Apr. 5, £178,039.

•

Tri-State Concentrates

Joplin, Apr. 15, 1958
(Unchanged from Apr. 10 *M&MM*)

•

Ferroalloys

(Unchanged from Apr. 3 *M&MM*)

•

Brass and Bronze Ingot

85-5-5-5 (No. 115) 25¼c; 80-10-10 (No. 305) 29¼c; 88-10-2 (No. 215) 32c; Yellow, (No. 405) 21¼c; and upward. Manganese bronze (No. 420) 22½c.

•

Smelters' Copper Scrap Prices

Custom smelters' buying prices for scrap, carload lots, refinery:

No. 1 copper and wire, 19½c; No. 2 heavy copper, 18c; light copper, 15¾c, refinery brass, 17½c.

Dealers' Scrap Prices

Dealers' buying prices, f.o.b. New York or equivalent freight points, for wholesale quantities, in cents per lb.

No. 1 copper wire	17@17½
Heavy copper & wire, mixed	15½@16
Light copper	13@13½
No. 1 composition	14@14½
Composition turnings	13@13½
Light brass	8@8½
Yellow brass turnings, mix	9@9½
Heavy yellow brass, mixed	9½@10
Auto radiators, unsweated	11@11½
Brass pipe, cut	12@12½
Rod brass turnings, No. 1	11@11½
Rod ends, brass	11@11½
New soft brass clips	13@13½
Cast aluminum, mixed	10@10½
Aluminum crankcases	10@10½
Aluminum clips, new soft	13@13½
Sheet aluminum, old clean	10@10½
Aluminum turnings, clean	6½
Zinc die cast, mixed	1¾
Zinc die cast, new	3
Old zinc	3
New zinc clips	4½
Soft or hard lead	8½@9
Battery plates	4
Babbitt mixed	10½@11
Linotype or stereotype	11½@12
Electrotype	10@10½
Solder joints close cut	15½@16
Block tin pipe	72@73
Autobearing babbitt	35@36
Monel clips, new	28@29
Monel sheet, clean	28
Nickel, rod ends	42@45
Nickel, clippings	42@45